National Institute of Environmental Health Sciences

Parasites in ungulates of Arctic North America and Greenland: A view of contemporary diversity, ecology, and impact in a world under change

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Year: 2012

Journal: Advances in Parasitology. 79: 99-252

Abstract:

Parasites play an important role in the structure and function of arctic ecosystems, systems that are currently experiencing an unprecedented rate of change due to various anthropogenic perturbations, including climate change. Ungulates such as muskoxen, caribou, moose and Dall's sheep are also important components of northern ecosystems and are a source of food and income, as well as a focus for maintenance of cultural traditions, for northerners. Parasites of ungulates can influence host health, population dynamics and the quality, quantity and safety of meat and other products of animal origin consumed by people. In this article, we provide a contemporary view of the diversity of nematode, cestode, trematode, protozoan and arthropod parasites of ungulates in arctic and subarctic North America and Greenland. We explore the intricate associations among host and parasite assemblages and identify key issues and gaps in knowledge that emerge in a regime of accelerating environmental transition.

Source: http://dx.doi.org/10.1016/b978-0-12-398457-9.00002-0

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Ecosystem Changes, Food/Water Quality

Food/Water Quality: Pathogen

Geographic Feature:

resource focuses on specific type of geography

Arctic

Geographic Location:

resource focuses on specific location

Non-United States, United States

Non-United States: Non-U.S. North America

Health Impact:

specification of health effect or disease related to climate change exposure

Infectious Disease

Infectious Disease: Foodborne/Waterborne Disease

Foodborne/Waterborne Disease: General Foodborne/Waterborne Disease

Resource Type:

format or standard characteristic of resource

Review

Timescale:

time period studied

Time Scale Unspecified